CLAIMS

1. A detachable counter assembly for a door system having a counterbalance system that includes a counter balance spring that is wound by a tool adapter to provide a selected tension for compensating for the weight of the door, the counter assembly comprising, a counter mechanism selectively rotatably affixed to the tool adapter, a sensor supported adjacent said counter mechanism and adapted to track rotation of said counter mechanism to generate tension information, and a display for said tension information associated with said counter mechanism.

2. The counter assembly of claim 1, wherein said display is coupled to said counter mechanism by wiring and provides a digital readout.

3. the counter assembly of claim 1, wherein said sensor engages said counter and displaces said counter mechanism a selected distance for each revolution of said counter mechanism.

4. The counter assembly of claim 1, further comprising a winding assembly releasably attached to the tool adapter at a first gear, wherein said first gear is selectively rotatably affixed to the tool adapter; a second gear engaging said first gear and adapted to rotate said first gear; a boss extending from said second gear, said boss having a tool receiving surface, wherein the counter assembly is supported on said winding assembly.

5. The counter assembly of claim 4, wherein said winding assembly includes a housing in which said first and second gears are rotatably mounted, said housing defining an axial opening for receipt of said tool adapter.

6. A door system comprising, a door movably mounted on a track assembly, a counterbalance system connected to said door and having at least one

spring, a tool adapter proximate at least one end of said counterbalance system, a detachable winding assembly adapted to selectively engage and selectively rotate said tool adapter to adjust tensioning of said spring, and a locking assembly interacting with said counterbalance system to maintain a selected tensioning of said counterbalance system upon detaching said winding assembly from said tool adapter.

7. A door system according to claim 6, further comprising a counter operatively interrelated with said winding mechanism to quantify and display tensioning of said counterbalance system.

8. A door system according to claim 6, wherein said locking mechanism is a pawl and ratchet.

9. A door assembly according to claim 6, wherein said winding assembly includes a housing, a first gear rotatably mounted within said housing having a first axis of rotation positionable coaxial with said tool adapter, said first gear defining a receiver adapted to rotatably fix said first gear to said tool adapter, a second gear operatively interconnected with said first gear to cause rotation thereof, said second gear being rotatably mounted in said housing with a second axis of rotation substantially perpendicular to said first axis of rotation, a boss adapted to receive a driver extending outwardly from said second gear.

10. A door assembly according to claim 9, further comprising a counter assembly having a fixed gear attached to an outer surface of said housing around an opening, a counter cam rotatably coupled to said first gear, and a rotating gear rotatably mounted on said housing and operatively interrelated with said fixed gear, wherein said counter cam has an

eccentric profile and engages said rotating gear to rotate said rotating gear a selected circumferential distance for each revolution of said counter cam.

11. The door assembly of claim 10, wherein said circumferential distance is equal to about one revolution and one tooth on said fixed gear.

12. The door assembly of claim 11, wherein said rotating gear is formed on an interior surface of said counter, and a scale is attached to an exterior surface of said counter, wherein said scale is adapted to indicate revolutions of movement of said counter relative to said fixed gear.

13. The door assembly of claim 12, wherein said scale includes a label having indicia thereon.

14. The door assembly of claim 10, wherein said first gear defines a socket coaxial with said receiver, said socket adapted to rotatably fix said counter cam to said first gear, wherein said socket has a reduced radial dimension relative to said receiver defining an annular shoulder engageable with said tool adapter to prevent over-insertion thereof.

15. A detachable tensioning tool in combination with a door system comprising, a door movably mounted on a track assembly, a counterbalance system connected to said door, first and second tool adapters at each end of said counterbalance system connected to first and second springs, a winding assembly including a housing and adapted to selectively engage and selectively rotate either of said first and second tool adapters, and stop surfaces on said housing preventing rotation of said housing during tensioning of said counterbalance system.

16. A detachable tensioning tool according to claim 15, further comprising brackets mounting said counterbalance system and attached to fixed angle irons.

17. A detachable tensioning tool according to claim 16, wherein said stop surfaces engage said angle irons.

18. A detachable tensioning tool according to claim 16, wherein said stop surfaces include a first stop surface and a second stop surface, said first stop surface engaging one of said angle irons when said winding assembly engages one of said first and second tool adapters and said second stop surface engaging a second of said angle irons when said winding assembly engages the other of said first and second tool adapters.

19. A detachable tensioning tool according to claim 14, wherein said winding assembly includes a gear having oppositely projecting driver engaging bosses, one of said driver engaging bosses engageable when said winding assembly is in engagement with said first tool adapter and a second of said driver engaging bosses engageable when said winding assembly is in engagement with said second tool adapter.

20. A detachable tensioning tool according to claim 15, wherein said winding assembly includes a driver engaging boss extending outwardly from said housing along an axis, and wherein at least one of said stop surfaces is adapted to position said housing such that said axis of said driver engaging boss extends rearwardly and downwardly.

21. A detachable tensioning tool according to claim 19, wherein at least one of said stop surfaces slopes downwardly and inwardly relative to said drive engaging boss.

22. A detachable tensioning tool according to claim 14, wherein said counterbalance system has a locking mechanism for maintaining a selected tension in said counterbalance system.

23. A detachable tensioning tool according to claim 14 further comprising, a counter associated with said winding mechanism to quantify and display tensioning of said counterbalance system.

24. A detachable tensioning tool according to claim 23, wherein said counter has different indicia for either of said door and said counterbalance system having different characteristics.

25. A detachable tensioning tool for use with a door system having a door frame enclosing a door opening, a door movably mounted on a track assembly attached to the door frame, a counterbalance system supported on brackets attached to the door frame and at least one tool adapter at an end of the counterbalance system, the tensioning tool comprising, a winding assembly including a housing and adapted to selectively engage and selectively rotate the tool adapter and at least one stop on said housing adapted to operate independent of the brackets to prevent rotation of said housing during tensioning of the counterbalance system.

26. A detachable tensioning tool according to claim 25, wherein said stop engages the door frame to prevent rotation of said housing during tensioning of the counterbalance system.